II. Policy Discussion of Recommendations

Today, solid waste management is not simply a singular practice to "get rid of trash," but instead is a structured, integrated system of collection, separation, transportation, and disposal. In developing solid waste policy, a number of concerns must be balanced including environmental impacts, social behavior and needs, and economics of the system and its components.

The goal of this policy discussion is to clarify the State Planning Office's recommendations, identify issues raised by the task force, and describe how policy choices are related and how they impact one another.

In their discussions, three issues seemed to be of particular concern to task force members. These were:

1. How to increase recycling rate;
2. Overall disposal capacity in Maine and particularly the rate of land use; and
3. Movement of waste across state borders.

The State Planning Office addresses these three topics, and others, in the following pages.

Affirm Existing State Policies

Maintain the Solid Waste Management Hierarchy

Maine's solid waste management hierarchy promotes:

- Reduction of waste generated at the source, including both amount and toxicity of the waste
- Reuse of waste
- Recycling of waste
- Composting of biodegradable waste
- Waste processing, which reduces the volume of waste needing land disposal, including incineration
- Land disposal of waste

The hierarchy serves as a policy statement that conveys Maine's preferences for how solid waste is managed. State agencies use it as a roadmap to set priorities, make program choices, and help make investment decisions. For example, the hierarchy has driven the state's focus on removing toxics from the waste stream in recent years.

Task force members were divided, not on the value of the hierarchy, which most agreed makes sense to minimize waste disposal, but on how it should be applied. Some interpret the hierarchy in strict priority order; that is waste management systems should be implemented in the order of preference. Others view the hierarchy as integrated, where a combination of management techniques should be employed based on what

works best and most cost-effectively for the type of waste being managed. The regulated community is most concerned about the application of the hierarchy, fearing that facilities at the bottom of the hierarchy might not be permitted.

The hierarchy is typically applied at higher levels, steering state policy and overall direction. It guides the state's regulatory scheme, but it is not the basis for deciding individual permits. However, as part of the State Waste Management and Recycling Plan, the hierarchy guides the Department of Environmental Protection in making public benefit determinations.

1. ***Recommendation****: Maintain the solid waste management hierarchy to guide the management of Maine's municipal solid waste in order to reduce the volume of waste requiring disposal. (No Change)*

Maintain the 50% Recycling Goal

Maine has a statewide goal to recycle 50% of its municipal solid waste by 2009[1]. Task force members expressed concerns with the statewide recycling goal, including how we measure it, whether it is achievable, and how it is applied.

Based on the State Planning Office's calculation, which includes construction and demolition debris, Maine recycles 35% of its municipal solid waste. According to the U.S. Environmental Protection Agency, which excludes construction and demolition debris, we recycle 49% of our waste. In EPA's ranking, Maine is the top recycler in the nation. Task force members told us that we should recognize the good job Maine is doing.

Some members of the task force view the recycling goal as a target to be achieved by a date certain. Others view it as a beacon towards which we continually strive, but may never reach. Nevertheless, the goal is becoming harder to achieve. Even as we recycle more, we generate more waste, which causes our rate of recycling to decrease each year.

Despite these complexities with the goal, it has served us well. The goal provides a fixed benchmark by which the state can judge its progress.

2. ***Recommendation****: Maintain the 50% recycling goal. Continue to calculate and publish the statewide recycling rate using both state and federal methodologies. (No Change)*

[1] Often misunderstood, Maine's recycling goal was never intended to require individual municipalities to recycle 50% of their waste themselves, although a number of them do. This is because some of the waste generated in a town is handled in other ways such as through the returnable beverage container system or by recycling vendors hired by businesses to recycle office paper and corrugated cardboard. The statute directs towns to make "reasonable progress" toward the 50% recycling goal. The State Planning Office has determined that an annual 35% recycling rate is reasonable progress.

Keep the Ban on New Commercial Disposal Facilities

In 1989, the Legislature banned the development of new commercial waste disposal facilities and vested control for the management of solid waste in the public sector. This was done to guarantee future disposal capacity, increase public confidence in the siting process, ensure that facilities meet the highest environmental standards, control the importation of waste, and improve waste reduction and recycling efforts.

Task force members told us that, since this policy was put in place, state- and municipal-owned disposal facilities have put a burden on the taxpayer to develop, construct, and operate; the public sector has the same degree of difficulty siting disposal facilities as does the private sector; and advancements in technology and management practices are more accessible to private sector investors than to either the state or local governments. Despite these challenges, the ban is an important policy tool for managing waste in Maine.

3. ***Recommendation****: Maintain the ban on the development of new commercial disposal facilities. (No Change)*

Continue State Responsibility for Siting Disposal Facilities

Task force members told us that there is a need to ensure safe, reliable, reasonably-priced disposal capacity into the future. To ensure adequate disposal capacity in the absence of new commercial facilities, the Legislature vested responsibility for siting and developing landfill disposal capacity in the state, specifically the State Planning Office.

In the 1990s, the state permitted the Carpenter Ridge site in T2 R8, outside of Lincoln, for the disposal of special waste.[2] This "greenfield" site with two million cubic yards of capacity is being held in reserve for future needs. In 2003, the Legislature directed the State Planning Office to purchase the Georgia Pacific landfill in West Old Town, an existing licensed disposal facility. The new state-owned landfill, known as Juniper Ridge, will provide an additional nine million cubic yards of landfill capacity, which translates into sufficient disposal capacity to help address the needs of the state well into the next decade.

4. ***Recommendation****: Continue state responsibility for siting and operating new solid waste disposal facilities. (No Change)*

[2] Special waste is a statutory classification of waste. It includes waste that is generated by other than domestic and typical commercial establishments and that exists in such an unusual quantity or in such a chemical or physical state that require special handling, transportation, and disposal procedures.

Preserve Existing Municipal Responsibility for Managing Solid Waste

State law lays out municipal responsibilities for managing solid waste generated within their boundaries. These include:

- providing solid waste disposal services for domestic and commercial solid waste generated within the municipality (38 MRSA §1305); and
- demonstrating reasonable progress toward the statewide recycling goal (38 MRSA §2133).

As Maine urbanized over the last century, solid waste management became the responsibility of local governments. The state's role in waste management has gradually expanded since the environmental movement of the 1960s and 1970s when the Legislature directed that local dumps be closed. Further, the Waste Management Act of 1989 provided for state planning for the management of solid waste, state policies to increase recycling, and state responsibility for siting solid waste disposal facilities.

Solid waste management arises from the municipal responsibility to provide for the health and public safety of its residents. In addition, solid waste management is still almost entirely funded by local revenues. At times, task force members expressed frustration about the cost and complexity of modern solid waste management. Yet, there was little sentiment to change the fundamental roles of either the state or municipal governments in managing solid waste.

> ***5. Recommendation****: Preserve existing municipal responsibility for managing solid waste. (No Change)*

Continue to Support Regional Approaches to Recycling

Sheer cost has driven municipalities to join together to manage solid waste. It drove groups of municipalities to support the construction of four regional waste-to-energy facilities in the late 1970s and 1980s, as old dumps were closed. Municipal landfills are also scaled for regional operation. Of the state's nine municipal landfills in operation today, only one is not shared by neighboring municipalities.

On the recycling side, the state fostered regionalization. State grants awarded in the early 1990s gave preference to multi-municipal operations for the construction of recycling processing operations. The $12 million distributed then largely established the regional recycling processing centers that serve us today.

Despite the current level of collaboration, small recycling programs find that there are greater economies of scale to be achieved. As small regional programs look to consolidate or to bring in additional communities, there are upfront administrative costs (legal fees, costs to develop interlocal agreements, expenses of converting systems for compatibility) that present barriers to increased regionalization.

6. ***Recommendation****: Continue to support regional approaches to solid waste management. Maintain and replenish the Fund for the Efficient Delivery of Local and Regional Services as one way to fund planning and implementation of regional approaches to solid waste management. (No Change)*

Policy Recommendations

Ongoing Review of Solid Waste Policy in Maine

There is strong public interest in waste management, which requires forums for public discussion. The Legislature created opportunities for discussion to occur in three ways:

1. as part of the State Planning Office's update of the five-year State Waste Management and Recycling Plan;
2. during legislative deliberation on the biennial Waste Generation and Disposal Capacity Report; and
3. as part of the solid waste policy review task force convened every five years.

The solid waste field is ever-changing. Task force members commented that the review of solid waste policy and disposal capacity occurs too infrequently to adequately address fast-changing solid waste issues. In addition, by the time the office's two-year disposal capacity report is completed, the data on which it is based are three years old. Further, the legislative directive that the task force concentrate solely on a review of policy misses opportunities for meaningful input on program and operational issues.

7. ***Recommendation****: Establish a solid waste advisory council to replace the current solid waste management policy review task force. The council would meet at least once a year and guide the State Planning Office on both policy and programmatic issues. (Statutory Change)*

8. ***Recommendation****: Update the waste generation and disposal capacity report section of the state plan annually and brief the Governor, Department of Environmental Protection, and Joint Standing Committee on Natural Resources on new information contained in the update. (Statutory Change)*

Move Beyond 50% Recycling

Fundamentally, waste is a failure to efficiently use resources. Addressing these inefficiencies presents an opportunity to add value to our economy. Existing businesses can save money and create new jobs in reuse, remanufacturing, and recycling industries. But to make this shift we need to look at our waste differently. We need to view it, not as a disposable, but as a resource.

In order to accomplish this, “waste-to-resources” has to become a fundamental strategy of state and municipal solid waste management. Collection, handling, processing, and disposal plans and strategies should be directed towards the full utilization of all materials with resource value. The state’s recycling policy should reflect a goal of a broader utilization of resources.

> ***9. Recommendation****: Add a legislative policy statement that favors waste reduction and maximizing waste diversion by encouraging new and expanded uses of solid waste generated in Maine as a resource. (Statutory Change)*

Lengthen the Trigger

Currently, the state owns a permitted, “greenfield” site, known as Carpenter Ridge, in T2 R8 outside of the Town of Lincoln for future development of a landfill if it is needed. The law requires the State Planning Office to notify the Legislature and to provide recommendations for developing state-owned disposal capacity when it determines there is four years of statewide capacity remaining. We estimate that developing the Carpenter Ridge landfill would take two full construction seasons, plus the time needed to authorize and sell revenue bonds, bid the construction process, and bid and negotiate the operations contract. Four years notice does not allow sufficient time to develop new capacity if the state faces a disposal capacity shortage.

> ***10. Recommendation****: Lengthen from four to six years the ‘trigger’ for the office to alert the Legislature of the need to develop state-owned disposal capacity. (Statutory Change)*

Revisit Host Community Benefits

‘Host community benefits’ refer to compensation paid to communities that host solid waste disposal facilities.

Current law requires owners of commercial disposal facilities to negotiate *in good faith* with the municipality in which a facility is located to formulate a host community agreement. If applicable, the agreement compensates for the local costs to improve or maintain roads impacted by the facility, develop local emergency response capacity, provide for monitoring, and other impacts as determined by the owner and the municipality. There is no requirement that agreement be reached. If an agreement is reached, there is no provision to revisit its terms, as operations change over time.

For state-owned disposal facilities, the state is also required to compensate host communities for roads, emergency response, and monitoring. The law for state-owned facilities is more prescriptive than for commercially-owned ones in that it provides for: 1) citizen advisory committees (that include abutters); 2) abutters to be compensated for loss of property value; 3) payment in lieu of taxes to the host municipality; and 4) a dispute resolution process.

With the acquisition of the West Old Town Landfill, now known as Juniper Ridge, the state negotiated agreements with the Town of Alton and the City of Old Town. Task force members suggest that there are lessons to be learned from these experiences that can make the process clearer in the future.

***11. Recommendation**: Revisit host community benefits to establish a clear and balanced process for negotiating host community benefits. Develop a protocol for the review of community benefit agreements during their lifespan. (Statutory Change)*

Research and Data Collection Recommendations

Quantify the Impacts of Solid Waste Policy in Maine

It has been nearly 20 years since the current solid waste management system was put in place. During task force deliberations, it became clear that our solid waste policies have driven the current system –a system that represents a long-term public and private investment of several hundred million dollars. The social, environmental, and financial costs of the current system or alternative scenarios are not well understood.

***12. Recommendation**: Conduct an analysis for use by policymakers of the economics of Maine's solid waste system, costs and benefits of changes to that system, and effects of change on solid waste stakeholders, including but not limited to:*

- *social, environmental, and financial costs and benefits of the current system*
- *social, environmental, and financial costs and benefits of changes to the current public and private ownership of solid waste disposal facilities*
- *costs and benefits of significantly increasing recycling*
- *the economic and environmental impacts of out-of-state generated solid waste on existing management and disposal infrastructure*
- *a comparative analysis of various methods of disposal, including what currently exists in Maine and emerging technologies*
- *effective use of state resources in managing solid waste.*

(Research/Study)

Reuse Construction and Demolition Debris

Construction and demolition debris (CDD) is a visible policy issue because of the rise in demand for its wood fraction as a fuel for biomass energy facilities. There is a real and potentially large (approximately a million tons a year) in-state market for the wood recovered from construction and demolition projects in Maine. In addition, any non-

recyclable residuals from the processing of the CDD for fuel wood recovery would be landfilled, impacting the capacity currently available.

What is CDD and how is it Managed?
CDD is defined in rule as solid waste resulting from construction, remodeling, repair, and demolition of structures. It includes: building materials, discarded furniture, asphalt, wall board, pipes, and metal conduits. It excludes wastes that meet the regulatory characteristics of hazardous and special wastes.

It is a difficult waste stream to track and manage because of its many components, its weight and volume, the scale of equipment needed to manage it, and the way it is commonly generated, collected, and transported.

Approximately 20 municipalities have their own CDD landfills, although capacity in those is rapidly being consumed. Other towns transport this waste in an unprocessed form for disposal at an existing commercial landfill or waste-to-energy facility.

CDD waste can be processed (meaning separating out the many marketable components and chipping the wood for fuel). There is significant processing capacity for CDD both in and out-of-state.

CDD as a Fuel Source
Maine's industrial base sees the regulated burning of the wood fraction of the CDD waste stream as as a way to reduce energy costs. The rise in demand for CDD has caused Maine companies to look out of state to meet their energy needs. This has raised concerns, expressed by task force members and others, about the importation of out-of-state waste to be used as a fuel.

The genesis of Maine's biomass energy policy was a Public Utilities Commission ruling in the early 1980s that forced the state's energy utilities to buy energy from alternative fuel sources. Further public policy support came from state permitting of biomass boilers to provide cost-effective disposal capacity for paper mills and timber landowners. Biomass boilers were fueled primarily by mill wood residue and silvaculture wood waste. Lastly, federal funds were provided to support construction of waste-to-energy facilities.

Over time, processed CDD wood waste, from both in-state and out-of-state, became available, was cheaper, and had a higher BTU value, than wood chips. Several Maine plants sought licensing amendments to allow them to accept clean, processed CDD wood waste as their fuel source and retrofitted their operations to allow them to meet air quality emissions standards.

The wood fraction of Maine's CDD is not sufficient to supply the fuel needs of the boilers operating in the state. This CDD market has led buyers, processors, and transporters to look elsewhere for additional wood fuel sources from CDD. Much of the importation of processed CDD for biomass fuel helps to support the financial viability of our paper mills and other operators of biomass boilers.

Other Markets for CDD
Other components of CDD also have resource value, especially for the construction industry. Concrete, cement, porcelain, brick, soils, sand, and rock recovered from construction and demolition projects have ready markets as aggregates. Asphalt from roads and parking lots and asphalt shingles are recovered for reuse as road base. Gypsum (sheetrock) is recycled as a soil amendment or back into sheetrock manufacture. One Maine company has developed a back-haul arrangement for municipalities where they pick up CDD components and deliver aggregate for use in town construction projects.

The challenges with reusing and recycling CDD include high transportation costs and a lack of volumes and economies of scales in the state to make processing and reuse cost-effective. Task force members voiced concern about the impacts of disposal of the toxic or unreusable components of CDD and the effect of CDD ash from biomass boilers burning CDD on landfill capacity as other concerns.

> ***13. Recommendation****: Explore options for reusing Maine-generated construction and demolition debris as a resource, including examining what other states have done. Analyze the cost-benefit of incentives and disincentives to support the management of this material. (Research/Study)*

Broaden the State's Disposal Capacity Analysis

The State Planning Office analyzes solid waste disposal capacity in its 5-year plan and in a biennial update to the Legislature. The office calculates the number of years of capacity remaining based on the projected consumption of existing, licensed capacity (making adjustments for increased waste generation and improved recycling) over a 20-year horizon. Many task force members feel that the state's analysis is too narrow and infrequent (also see recommendation #8).

> ***14. Recommendation****: Expand the analysis of the state's needs and capacity for managing waste, by adding the following:*
>
> - *cover a 25-year time horizon*
> - *identify and assess any regional capacity issues*
> - *assess volume as well as tonnage*
> - *assess stability and life expectancy of existing facilities*
> - *assess the amount and type of imported and exported waste, how it is being used, and where it is going*
> - *develop a protocol for responding to natural disasters*
> - *assess impact of recycling on disposal capacity*
> - *analyze recycling and processing capacity. (Research/Study)*

Fund Public Recycling

In the early 1990s, the state awarded $12 million to municipalities and regional recycling associations to establish Maine's public recycling infrastructure. In 2002, voters

approved a $1.5 million bond, which was divided to fund local capital infrastructure for both recycling ($600,000) and household hazardous waste collection and storage ($900,000). As a result, the number of recycling programs in Maine grew from 60 in 1988 to over 300 today, providing recycling services to 98% of Maine's population.

While this is a worthy achievement, there is a need for new funding to support municipal recycling and hazardous waste collection. 15-year old equipment now needs replacing and local recycling programs continue to grow, often requiring expansions of facilities and equipment. Further, municipalities must now provide their residents with a means to recycle (or collect for out-of-state disposal) mercury-containing fluorescent lamps, thermometers and thermostats, PCB ballasts, leaded televisions and computer monitors, and other hazardous materials, which the state bans from disposal.

Greater volumes and efficiencies are needed as well. Several task force members believe that to increase recycling, single-stream processing centers will be needed. These centers receive unseparated recyclable materials and automated technology separates them into their recyclable components, such as glass, tin cans, paper, and plastic. This type of processing capacity is sophisticated, requires large volumes, and is costly, but savings may be realized in collection costs as well as through an increase in recovery. There is a need to understand the amount and type of processing capacity needed to support Maine's recycling efforts (also see recommendation #14).

In 2002, grant requests totalled over $1.1 million dollars for just the recycling portion of the bond, resulting in nearly half of the requests being unfunded. Demand for grant funds for household hazardous waste collection and storage will continue as disposal bans on "e-waste" go into effect this year.

15. ***Recommendation****: Assess the results of state grants given to municipalities in the past, establishing benchmarks of success. Use this analysis, and take into account developments in technology, to inform future funding proposals for public recycling programs. (Research/Study)*

Programmatic Recommendations

Fund Public Recycling Education

To increase recycling rates, continuous statewide efforts to educate the general public on solid waste and recycling issues are needed. Currently many public messages about solid waste and recycling are disseminated from divergent sources. Local education would still be required to inform residents about local requirements. Nevertheless, task force members advise that a high impact, coordinated, statewide campaign would help increase participation in local programs.

16. ***Recommendation****: Design and develop funding proposals for an on-going public education and outreach campaign on the value of recycling and composting, targeting residents and businesses statewide. (Programmatic)*